CONCENSUS DEVELOPMENT CONFERENCE at the National Institutes of Health

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During November 28-30, 1979 the National Institute of Dental Research invited dentists to gather at the National Institutes of Health in Washington, D.C. to discuss current information on the topic of "Removal of Third Molars". Approximately 250 dentists from throughout the United States and other parts of the world attended this conference. General dentistry, plus the specialties of oral surgery, prosthodontics, periodontics, and orthodontics were represented at this meeting.

During the three day meeting the main topics discussed were concerning how third molars influence or contribute to pathologic, periodontic, orthodontic, prosthetic, and oral surgery issues pertaining to the human dentition and the oral environment.

Workshops were then formed to involve specific groups of dental specialists, plus conference attendees in general, to treat each of several issues "in depth". These topics were:

- The effect of third molar removal on growth and development.
- The timing and technical considerations for third molar removal.
- The periodontic and prosthetic considerations of third molar removal.
- The advantages and disadvantages of third molar removal.

On the third day of the conference concensus reports were given from the various workshops concerning the above topics. These reports are currently in preliminary draft form. They most likely will be published in the near future in the Journal of Oral Surgery or some comparable dental journal.

The conference provided an atmosphere for lively discussion, pro and con, concerning the problems attendant to the removal or retaining of third molars, with the concensus reported as follows:

I. The effect of third molars on growth and development:

- There is no evidence to suggest that a third molar is necessary for the development of the basal skeletal components of the maxilla and mandible.
- There is no evidence that the trauma of surgery has any effect outside of the alveolar process.
- In some situations, early removal of third molars may minimize alveolar bone loss at the distal of the second molar, while in other cases the loss may be greater.

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- Differential diagnosis is important in the timing of the removal of third molars so as to minimize alveolar bone loss.

II. Prediction of Third molar impaction or eruption:

- Because of clinical evidence of fewer adverse sequelae with early removal of impacted third molars some mechanism for determining early the final status of the dentition would benefit the patient considerably.

- Various mechanisms, such as the Wetzel grid, and other growth curves, (i.e. Tanner, Scammon, et al) have been developed which permit a reasonable projection of stature and other elements of skeletal growth.

- General dentofacial growth predictions are in wide use and seem to justify their application. However, the concensus was that predictive techniques for third molar eruption or impaction are not highly predictive, are overly simplistic, and should be used with caution, based on current research with additional longitudinal records.

- There are cogent orthodontic reasons for early removal of third molars in specific clinical circumstances. There are similarly strong reasons to retain third molars, if at all possible, particularly when/other tooth sacrifice has been a necessary part of orthodontic guidance. Multiple factors must therefore be considered in the decision-making process of whether third molars should or should not be removed.

III. Lower incisor crowding due to the presence of third molars:

- It has been suggested that there is a cause and effect relationship between third molar eruption and crowding in the lower anterior region of the mandible. The concensus group viewed this evidence as purely circumstantial.

- All studies to date suggest that crowding of lower incisors is produced by many factors which include tooth size, tooth shape, narrowing of the intercanine dimension, retrusion of incisors and growth changes occurring in the adolescent stage of development.

- There is little evidence to suggest that eruptive forces from a third molar are capable of producing mesial migration of the dental arch, resulting in crowding of anterior teeth.

- There is little rationale, with present evidence, for the extraction of third molars to minimize present or future crowding of anterior teeth.

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IV. Third molar extraction as an adjunct to orthodontic therapy:

- Orthodontic therapy in both maxillary and mandibular arches may require posterior movement of both first and second molars, either by tipping or translation, which can result in the impaction of third molars.

- It is possible that third molars are capable of inhibiting retraction procedures for first and second molars.

- Impacted third molars are probably not the cause for the forward relapse after posterior movement of both first and second molars.

- To avoid impacting third molars it may be deemed advisable in some patients to remove third molars before starting retraction procedures.

- Removal of other teeth in the arch, such as premolars, or first or second molars, may allow mesial displacement of the remaining teeth in the segment, distal to the extraction site. This can increase the room available for third molar eruption. However, there is no assurance that third molars will then erupt into good alignment, since initial axial inclination may be poor and may become worse during mesial drift. This is particularly true in the mandibular arch. Therefore, careful treatment planning, timing and long-term management are required to insure success.

- If adequate room is available for third molar eruption every effort should be made to bring these teeth into functional occlusion in patients having comprehensive orthodontic treatment.

V. The timing and technical considerations for third molar removal:

- Timing for third molar removal is usually related to referral of the patient by the general dental practitioner, orthodontist, etc. before any symptoms develop, or following the inflammatory response associated with eruption or attempted eruption.

- Most third molars have been removed during the early to late teens, either because they have become symptomatic, or during the retentive phase of orthodontic treatment.

- Patients with asymptomatic third molars during the normal third molar eruptive period usually ignore such teeth until a pathological condition develops with possible associated symptoms. This group presents the greatest challenge in all aspects of management, particularly in the control of post-surgical morbidity and long-term complications.

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- Certain clinicians and investigators advocate early enucleation of the third molar tooth germ or bud, based upon predictions of growth and development. The general concensus was that this can best be done before one-half to two-thirds of the tooth root has been formed.

- Bud enucleation at earlier patient ages than this must be based upon well-validated growth prediction methods and is not generally applicable at the present time.

- The following criteria are recommended for the timing of third molar removal:

    - Desirability of utilizing dental age rather than chronological age as a criterion for the removal of third molar teeth.

    - Desirability of performing third molar removal during a period of least psychologic vulnerability.

    - Desirability of performing surgery in an age group in which minimum morbidity might be encountered.

    - Third molar bud enucleation should not be performed on those patients that might be at risk relative to future loss of dentition.

Concensus was that enucleation of the third molar bud would be desirable when performed on the basis of valid growth predictions made in conjunction with orthodontic diagnosis.

VI. Deficiencies in our present knowledge concerning third molars are:

- What is the relation of the third molar to:

    - crowding of the dentition?

    - growth and development of the tuberosity and retromolar areas?

    - alveolar arch and length?

- What is the psychological effect of third molar surgery at various ages?

- What is the optimal method for predicting third molar eruption?

- How can the post-operative management of the ambulatory patient be improved to reduce morbidity?

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- Does earlier removal assure higher distal bone level on the second molar tooth and lessen periodontal pocket formation?

- What is the relative cost to the patient of early vs. late third molar removal (monetary cost and personal discomfort)?

- What is the best mucoperiosteal flap design to minimize periodontal pocket formation?

- Does instrumentation, (i.e., elevators, burs, chisels) increase bone loss about the second molar?

- What is the effectiveness of such adjunctive measures as steriods, antibiotics, and socket treatment in decreasing post-surgical morbidity?

- What are the factors that induce pathologic changes (cysts, tumors) in the tissues adjacent to third molars?

- What contribution does the third molar make to the final positioning of the second molar?

- What is the incidence of third molar root impingement on the inferior alveolar neurovascular bundle?

- What are the causes of third molar migration to ectopic sites, especially through dense bone?

VII. What is the post-surgical periodontal status of teeth adjacent to the sites of third molar removal?

- If impacted and potentially non-functional third molars are to be removed this should be done as early as possible to better assure the periodontal health of the second molar.

VIII. Are there techniques of removal which can obvitate post-surgical periodontal morbidity?

- There is little experimental data to support one flap approach over another in regard to the subsequent periodontal status.

- There may be less risk inherent in the design which does not disrupt the gingiva attachment of the second molar, provided there is no crushing of the remaining gingiva during the use of elevators.

- The method of bone removal (i.e., bur vs. chisel) has not been found to affect crevicular depth.

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IX. How does the physical and chronologic status of the patient affect the decision to remove third molars?

- In the assessment of operative risk the patient is the only constant factor in the face of numerous surgical variables.
- Operative risks may be categorized as follows:
    - risks related to the patient.
    - factors related to the surgical procedure and operating conditions.
    - anesthesia conditions
- Age perse, in an otherwise health individual from the seventh year on, is probably <u>not</u> a critical factor in the mortality involved in third molar removal.

X. Is there a standard surgical protocol for the removal of third molars that is most effective in reducing post-surgical morbidity?

- Morbidity associated with third molar removal can best be minimized by selection of a well-planned surgical approach based upon sound surgical principles, and by executing this surgery with careful attention to detail and the utmost respect for the tissues.

XI. What are the appropriate anesthetic methods to be employed in conjunction with third molar removal?

- The anesthesia method selected should:
    - provide adequate analgesia for the duration of surgery.
    - permit efficient and thorough treatment of the surgical condition.
    - meet the emotional requirements of the patient so that persistent psychological harm is not done to the patient.
- Local anesthesia alone may provide adequate regional analgesia for routine incomplicated surgical procedures and often suffices for emotionally stable patients.
- Various conscious-sedation agents and/or techniques are available to reduce anxiety, allay fear, produce amnesia, elevate the pain threshold and limit central transmission of noxious stimuli. Local anesthetic agents are administered in conjunction with sedative agents to provide regional analgesia.

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- General anesthesia enhances the ability to perform complex extensive surgical procedures while meeting the emotional and psychological needs of the patient.

- Technic selected should be determined on the basis of a thorough evaluation of each patient, after a thorough consideration of all the factors involved.

XII. Is there a relation between anesthetic methods and certain post-surgical complications?

- Clinical experience indicates a relationship between anesthesia techniques (local anesthesia vs. general anesthesia with or without vasoconstrictor) and certain post-surgical complications (tissue ischemia followed by reactive hyperemia when local anesthesia has been used). A cause-and-effect relationship has not been substantiated. Controlled studies to establish these relationships are desirable.

XIII. What is an appropriate educational approach to the instruction of dental students and dentists regarding the indications, timing, and techniques for third molar removal?

- It is necessary to instruct them in the recognition of the need for early removal of third molar teeth in those instances where there are definite indications for so doing. They should be able to properly assess impacted third molars so as to determine in which instances they possess the ability to perform the indicated surgery. The important matter is for diagnostic competence.

- It is essential that the practitioner who undertakes the removal of third molar teeth possess adequate diagnostic skills and be surgically competent to perform the procedure. He should also be able to manage post-operative sequelae.

XIV. What are the economic implications of third molar retention vs. prophylactic removal with emphasis on timing (i.e., early vs. late) and technique?

- The broad scope of cost as it relates to techniques and timing was reviewed as to its impact on the topic of third molar removal. Included should be:

    - cost to the patient
    - cost to the insurance carrier
    - cost of hospitalization if indicated, either one or more days of stay vs. the cost of office surgery

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- There is a great need for a clear understanding of the indications for third molar removal with the accompanying costs to the patient and to society.

XV. Prosthodontic considerations for third molar removal:

- The primary goal of dentistry is to preserve the natural dentition as long as the teeth do not interfere with the overall health of the patient. This goal should apply to all teeth, including the maxillary and mandibular third molars, since there are situations when the third molar can be of useful service to the patient.

- There is no evidence that fully-erupted third molars in normo-version should be extracted.

- Fully-impacted third molars should be removed when there is evidence of pathological changes.

- Partially impacted third molars should be removed when they have pathological changes which cannot be successfully managed.

- Evidence of the high incidence of premature loss of first and second molars suggests a need for conservation of third molars.

- If a third molar can be retained and maintained in a state of health, it may be invaluable in providing support, stability and retention for a fixed or removable prosthesis.

- Retention of a third molar in a state of health can serve a useful purpose in bone preservation and maintenance of vertical dimension.

- Third molars should be considered as potential prosthesis abutments when the following factors are satisfactory:

    - coronal and root morphology

    - position and alignment in the dental arch

    - reltionship to adjacent teeth

    - access for restoration and prophylaxis

    - occlusal relationships and support for fixed or removable prosthesis

- Although removal of a third molar can lead to extrusion of the opposing third molar, the opposing third molar should not be extracted, but should be evaluated for its possible use.

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- There is no evidence that removal of a third molar will provide space to enhance occlusal function.

- There is no evidence that prosthetic coverage of a fully impacted third molar will serve as a stimulus to eruption.

- There is no evidence that delayed removal of a third molar will create significant problems in prosthodontic management of an edentulous area, even though surgical morbidity is increased in the older patient.

- The following questions are worthy of additional consideration:

    - What is the quantitative effect of the retention of the mandibular third molar in preservation of the posterior alveolar process?

    - What is the effect of the removal of the third molar on the reduction of residual ridges?

    - What is the influence on eruption by coverage of a fully impacted third molar with a denture base?

    - What is the quantitative difference in bilateral proprioceptive response as influenced by the presence of periodontal ligament input from the third molar on one side as compared with contra-lateral mucosa input under a denture base?

    - What is the quantitative effect of a maxillary third molar on the development and maintenance of the bony tuberosity?

    - What is the relative risk/benefit of tooth supported (overdenture) vs. tissue supported complete dentures in the terms of patient visits, manpower hours, patient satisfaction, and total cost?

        - What is the relative risk/benefit in retaining or delayed removal of third molars for possible prosthodontic use?

XVI. Concerning periodontal considerations for third molar removal it was unanimously agreed that:

- Several clinical impressions regarding third molars lack scientific data for support.

- The frequency of periodontal problems intrinsic to third molars themselves is <u>not</u> defined.

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- The frequency of periodontal problems on second molars due to adjacent third molars is not defined.

- There is conflicting evidence from clinical studies relating to the effect of third molar removal on the periodontium of the adjacent second molar.

- There is lack of long-term data available because all clinical studies terminated one year or less after extraction.

- There is no evidence that fully-erupted third molars in normal version should be extracted.

- Fully-impacted third molars should be removed when there is evidence of pathological changes.

- Partially impacted third molars should be removed when they have pathological changes which cannot be successfully managed.

- Removal of fully-erupted third molars does not appear to detrimentally affect the periodontal status of the adjacent second molar.

- After removal of partially or fully-impacted third molars there may be increased loss of attachment on the distal surface of the adjacent second molar. This does not necessarily suggest early loss of the second molar will therefore be the result!

    - The significance of this loss of attachment is not thoroughly understood.

    - This trend appears to be less in the younger age groups.

- There is indication that reduction in plaque level and gingivitis may occur on the distal surface of the second molar after extraction of the adjacent third molar. The effect of these reductions on the long-term maintenance of the second molar is not known.

- Although an unopposed third molar may extrude, it should not be extracted if it can contribute to the future maintenance of the dentition.

- Certain clinical parameters have prime importance and should be considered and quantitated when considering the periodontal health of a patient:

    - clinical attachment level
    - pocket depth
    - plaque status
    - gingival status
    - alveolar bone height on the distal of the second molar
    - width of keratinized and attached gingiva
    - furcation involvement
    - tooth mobility

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The workshop defined the following areas of importance for future research, specifically in relation to periodontal considerations:

- Is the fully-erupted third molar more susceptible to periodontal disease than any other tooth in the dentition?

- Does retention of fully-erupted third molars contribute to the loss of attachment on the adjacent second molar?

- Does retention of partially impacted third molars contribute to loss of attachment on the adjacent second molars?

- There is a need to characterize extrusion behavior of unopposed third molars.

- Is patient age a factor of importance in relation to atttachment loss after removal of fully-erupted, fully-impacted, or partially impacted third molars?

- Does removal of calculus and exposed cementum at the time of extraction result in a more coronal attachment level on the distal surface of the second molar?

- Can periodontal attachment be maintained on partially impacted and fully-erupted third molars?

- What is the effect of pre-existing periodontal disease of the second and third molar upon healing following extraction of the third molar?

- What is the incidence of second molar root resorption due to adjacent third molars?

- What is the effect of post-operative plaque control on healing following third molar removal?

- The periodontal status on the distal surface of second molars in situations of long-term third molar presence should be compared with periodontal status following long-term third molar removal.

- How do variations in flap design and bone removal affect the periodontal status on the distal of the adjacent second molar?

- The periodontal histopathology of partially impacted and fully-impacted third molars should be investigated using human material.

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XVII. Morbidity associated with removal of third molars:

(Morbidity was defined as those conditions resulting from anesthesia or surgery associated with third molar removal that will alter the well-being of the patient.)

- Chalmers Lyons Academy data showed that 16.7% of 990 patients presenting for third molar removal had one or more associated health problems.

- In patients over the age of 35 the incidence of associated health problems increased to 32.7%, with 20.3% giving a history of some type of problem relating to the cardiovascular system.

- The most common intra-operative types of morbidity are:

    - hemorrhage
    - soft tissue trauma
    - nerve damage
    - tooth injuries
    - bone injuries
    - anesthesia and drug complications
    - sinus involvement
    - bacteremia

- Chalmers Lyons Academy reported 5.8% experienced excessive hemorrhage.

- Robinson, Franks, Van Gol, Howe, Payton, and Kipp, et al. reported inferior alveolar nerve damage varying from 1.3% to 4.4%, with permanent dysesthesia as high as 1%.

- Rud reported lingual nerve injury in 1% of the cases, or 7 out of 718 extractions. Verne reported 0.5% to 2% out of 449 cases, and 1.1% of 990 patients according to the Chalmers Lyons Academy.

- Chalmers Lyons Academy noted that the incidence of lingual nerve injury increased from 0.6% to 1.8% in the patients over 35 years of age.

- Injuries to teeth occurred in 0.3% of 990 cases as researched by the Chalmers Lyons Academy.

- The most frequent short-term post-operative complications are:

    - pain
    - swelling
    - trismus
    - ecchymosis
    - hematoma
    - infection
    - adverse systemic effects

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- Chalmers Lyons Academy reported an incidence of:
    - 12.3% of patients experienced excessive pain
    - 18.6% excessive swelling
    - 5.7% trismus
    - 3.3% ecchymosis
    - 2.3% hematoma
- The dental patient must be informed about any permanent condition that has an incidence greater than 0.5%, or any transitory condition that occurs with an incidence of 5% or more.
- Alveolar osteitis occurs in between 5% and 16%, according to various authors, and this incidence increases with the age of the patient.
- Post-operative healing has been studied histologically, and it was reported that there was a lag at ten days in the 60-year-old patient in comparison to the 20-year-old patient.
- Long-term morbid conditions can occur post-operatively, following third molar removal. These include:
    - nerve dysesthesia
    - prolonged pain
    - osteomyelitis
    - trismus
    - tooth damage
    - periodontal disturbances
    - permanent bone loss
- There is evidence in the literature that periodontal changes associated with the extraction of third molars may be reduced if this removal is accomplished at an early age.
- Surgical damage to the periodontium distal to the second molar is usually associated with the degree of approximation of the third molar to the second.
- Of the long-term morbidity factors only three may be permanent. These are:
    - tooth injury
    - dysesthesia
    - bone deformity
- Age is an important factor in relation to the incidence of morbidity. Studies have shown that as the patient gets older:
    - the operative procedure becomes prolonged
    - more post-operative visits occur
    - there is a higher incidence of nerve damage
    - there is a greater occurrence of alveolar osteitis
    - the patient requires a longer time to become asymptomatic

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- It was the consensus of the group that, where indicated, third molars should be removed in the younger aged patient because there is less morbidity of a transitory and permanent nature.

- There was considerable discussion regarding the term "prophylactic removal" as it applies to third molars. It was concluded by this workshop that the malposed or impacted third molar represents a pathological condition, and therefore to use the term "prophylactic" to describe its removal is inappropriate.

- Summarization from this workshop is as follows:

    - There are a large number of morbid conditions that can accompany the removal of the third molar.

    - Based on clinical experience most of these conditions have a low occurrence rate and very few are permanent.

    - There is scientific data to support a number of these clinical opinions, but others are unsupported at the present time.

    - There is a direct relationship between the incidence of morbidity and increasing age.

    - These findings support the concept of removing impacted third molars, when indicated, in the younger patient.

- Additional recommendations were made for:

    - Prospective studies on the incidence of pre-operative intra-operative, and post-operative morbidity.

    - Replications studies on the relation of morbidity to age.

    - Studies on the effect of third molar retention and removal on the status of the periodontium of the second molar.

    - Therapeutic approaches to the prevention or control of pain, swelling, trismus, infection, and hemorrhage.

XVIII. The advantages and disadvantages of third molar removal:

Francis Howell presented a paper identifying the fact that pathological processes associated with unerupted teeth are primarily confined to the crown area.

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Gilbert Lilly discussed caries, periapical disease and external crown resorption of impacted teeth. Caries can occur if impacted and unerupted teeth if there is microscopic communication with oral fluids.

- Idiopathic coronal, external resorption is seen rarely but radiographically resembles caries.

Robert Triplett discussed inflammatory diseases associated with erupted and partially erupted third molars:

- Pericoronitis, cellulitis, osteomyelitis, and sinusitis.

- Because of arch size and tooth position most third molars cannot erupt fully. Therefore, pericoronitis is a common occurrence although its incidence in the general population is not established. Studies suggest an incidence range of 11 to 75%.

Killey and Kaye suggested that if a patient reports two or more episodes of pericoronitis, the third molar should be removed.

- Serious infections, such as cellulitis and osteomyelitis, can be sequelae of pericoronitis. These are less frequently seen since the widespread use of antibiotics.

- The medically compromised patient (e.g., diabetic, immunosuppressed) is at greater risk for developing post-operative complications.

Triplett expressed the opinion that, because of the risk of infections, oral surgeons should remove partially erupted or impacted third molars. However, studies should be undertaken to support this clinical practice.

- A number of questions arose following Triplett's paper:

  - What is the frequency of recurrent pericoronitis?

  - What is the frequency of contralateral pericoronitis?

  - How much is either of the above two situations influenced by intervention in all four quadrants at initial presentation?

  - Is there a place for operculectomy?

  - If the operculum is excised, does this effect permanent cure or is recurrence likely?

  - How effective is retention of such third molars?

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Robert A. Goepp suggested that there was no correlation between myofascial pain dysfunction syndrome, termpromandibular joint disease, and impacted teeth. There was general agreement with this statement.

Ralph G. Merrill discussed third molars and fracture of the jaws.

- There is no relation between the presence of third molars and maxillary fractures.

- In the mandible, reports suggest that the presence of a lower third molar increases the likelihood of a fracture at the angle.

Harold Stanley and Ellen Eisenberg presented papers on cysts and neoplasms associated with impacted third molars. Both agreed that based on credible data:

- The highest incidence of follicular cysts is associated with mandibular third molars. This type of cyst occurs most frequently in the second decade and progressively decreases in incidence in subsequent decades.

- Based upon changes observed in the follicular epithelium and reported cases, the possibility of a de novo, mural ameloblastoma occurring after age 30 is slight.

- Compared with benign neoplastic disease, malignant changes in the epithelium of dental follicles generally occurs far less frequently and predominently in patients over 40 years of age.

- Discussion ensued questioning:

  - Does the data justify "prophylactic removal" of third molars at an early age?

    - Based upon Frazier's presentation on decision tree analysis "prophylactic removal" based solely on data related to neoplasia <u>does</u> <u>not</u> appear to be justified.

- It was suggested by all oral pathologists present that soft tissue removed with third molars should be submitted for gross and microscopic examination in order to document the true incidence of cysts and tumors associated with third molars.

- The importance of appropriate radiographic examination was emphasized in the discussion of the lesions associated with third molars.

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Stuart White presented a survey of the literature relevant to the resorption of second molars by impacted third molars:

- Based on a study of panoramic radiographs of 990 cases, the incidence of second molar root resorption was found to be 1.2% in the maxilla and 0.2% in the mandible.

Lionel Gold, in a worldwide search of the literature, discovered one Russian case report of "Highmoritis" related to an impacted maxillary third molar. Based on this data, primary sinusitis resulting from impacted maxillary third molars does not appear to be a major public health problem!

Concensus Statements:

I. Impacted, unerupted or partially erupted third molars with associated evidence of pericoronal follicular enlargement should, in general, be removed.

- Soft tissue associated with such teeth should be submitted for pathological examination.

II. Impacted teeth with oral communication appear to be prone to the development of associated inflammatory reactions. Such teeth may be considered for removal.

- S.C. White disagreed with this statement and submitted the following minority report:

"Statement II argues that since pericoronitis occurs in some individuals, all impacted third molars should be removed, regardless of the absence of symptoms, including those seen in individuals in the 4th, 5th, or 6th decades. Before accepting this policy, it is at least necessary to determine the actual incidence of pericoronitis. If the actual incidence of pericoronitis is low, patients who would not have developed pericoronitis would then be arbitrarily subjected to surgery. Further, it is not clear that there is a significant compromise to the patient who avoids surgery and is treated only when symptoms develop. Indeed, in these cases such prophylactic surgery may carry greater risk and cost in terms of pain, trismus or dry socket than the risks of pericoronitis. In the absence of relevant data required to weigh therapeutic alternatives, it appears arbitrary and whimsical to recommend that all asymptomatic third molars should be removed."

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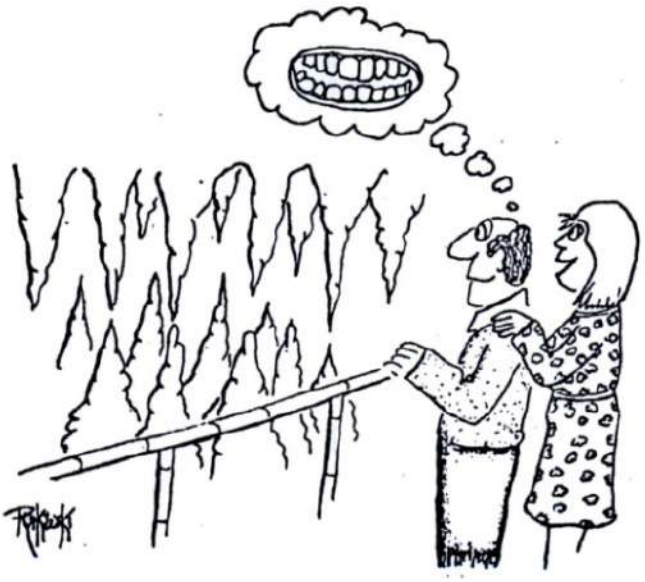
III. Unless there are extenuating circumstances, such as compromised health of the patient or unusual position of the tooth, when it is determined that an impacted tooth does not or will not perform a useful function in the mouth, the tooth should be removed.

- Concensus could not be reached on this statement. There is insufficient data available and conflicting clinical opinions on this subject. It was, however, the concensus of the group that research is required to determine the probability that unerupted teeth will develop disease or compromising conditions.

IV. Third molars with caries or resorption inaccessible to restorative measures, or third molars contributing to caries or resorption in adjacent teeth should, in general, be removed.

V. If there is absence of a third molar and prior extraction is not elicited by history, appropriate radiographic examination must be considered.



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